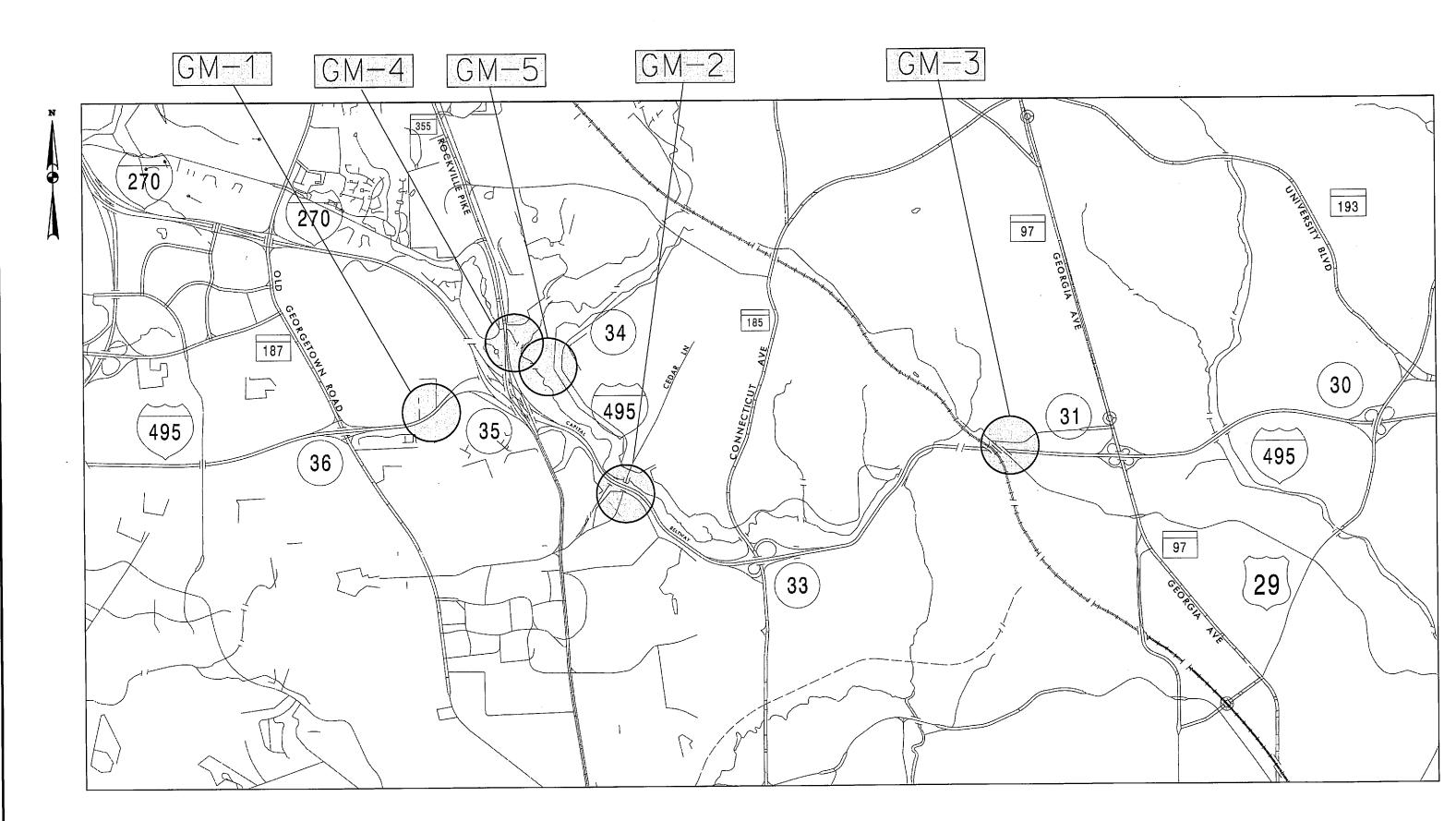
PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF FIVE GROUND MOUNTED SIGNS FOR THE NATIONAL INSTITUTES OF HEALTH AND WALTER REED MEDICAL CENTER NEAR EXIT 34 OF I-495.

THIS PROJECT IS LOCATED IN MONTGOMERY COUNTY.



NIH & WALTER REED SIGNING NOT TO SCALE

<u>EQUIPMENT LISTS</u>

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR NONE

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	<u>UNIT</u>	QUANTITY
1001	MAINTENANCE OF TRAFFIC PER ASSIGNMENT	EΑ	1
8001	F & I CONCRETE FOUNDATION - GROUND MOUNTED SIGNS	CY	16
	F & I BREAKAWAY BASE SUPPORT SYSTEM 'B' FOR	EΑ	6
8010	TO A V C V	LF	28
8024	F & I WOOD SIGN SUPPURIS UP TO 4" X 6	SF	827
8026	F & I EXTRUDED ALUMINUM SIGN AND ALL HARDWARE, TYPE IX OR TYPE XI	SF	20
8028	F & I SHEET ALUMINUM SIGN AND ALL HARDWARE, TYPE IX OR TYPE XI		20
8029	F & I PROTECTION VEHICLE - TRUCK MOUNTED	UD	707
8033	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS	SF	387
8060	F & I GALVANIZED STEEL BEAMS (W8 X 21)	LF	71
8061	F & I GALVANIZED STEEL BEAMS (W10 X 26)	LF	85

INDEX OF SHEETS

1	AT-1	TITLE SHEET
2	SN-2.1	SIGNING PLAN
3	SN-2.2	SIGNING PLAN
4	SN-2.3	SIGNING PLAN
5	SN-2.4	SIGNING PLAN
6	SN-3.1	SIGN DETAILS & DIMENSION
7	SN-3.2	SIGN DETAILS & DIMENSION
8	SN-4.1	GUIDE SIGN SUPPORTS

GENERAL NOTES

1. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE PROPOSED SIGNS WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

NIH & WALTER REED SIGNING

I-495 EXIT 34

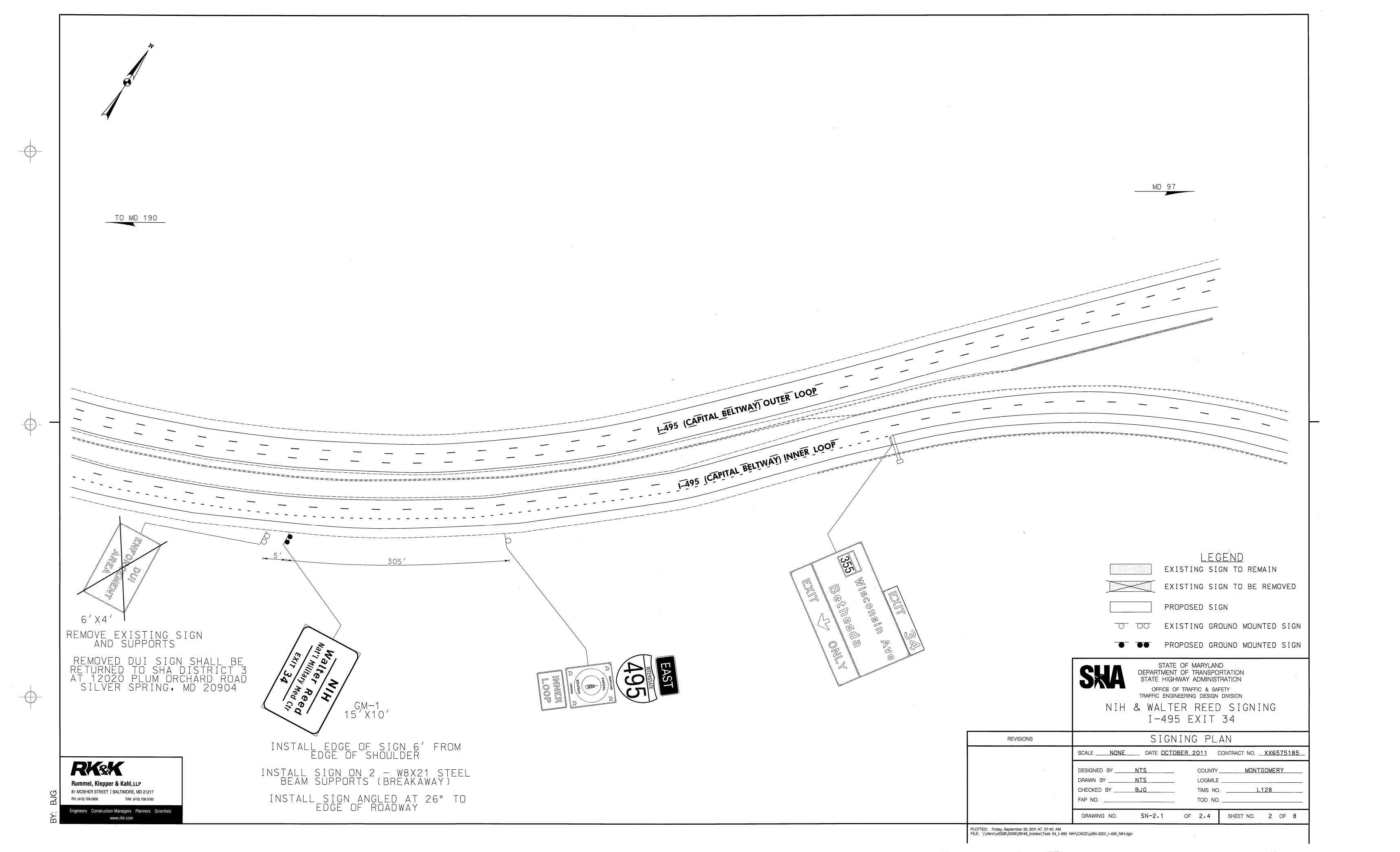
APPROVALS	REVISIONS		TITLE	SHEET	
DMUX Brall 10/12/2011 TEAM LEADER Churchist ASST. DIVICHIST DIVISION CHIEF OFFICE DIRECTOR		SCALE NONE	DATE <u>OCTOBE</u>	R 2011	CONTRACT NO. <u>XX6575185</u>
	·	DESIGNED BY DRAWN BY CHECKED BY FAP NO	NTS BJG	TIMS NO	MONTGOMERY L128
		DRAWING NO.	AT-1	OF 1	SHEET NO. 1 OF 8
	PLOTTED: Friday, September 30, 2011 AT 07:40 AM FILE: \\rkm\v2008\2008\08148_tcddes\Task 54_I-495 N	NIH\CADD\pAT-0000_I-495_NIH.d	gn		

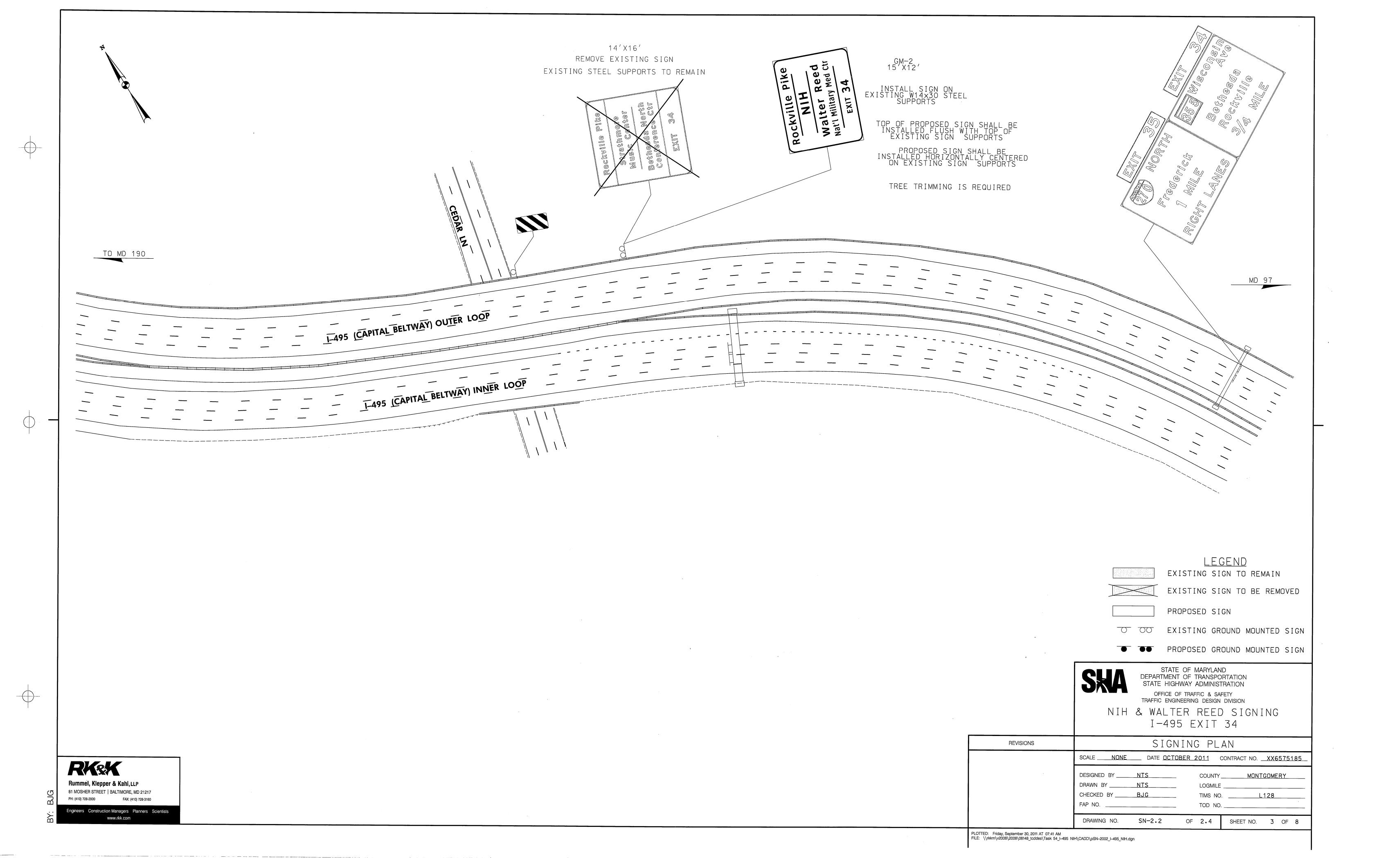
Rummel, Klepper & Kahl, LLP

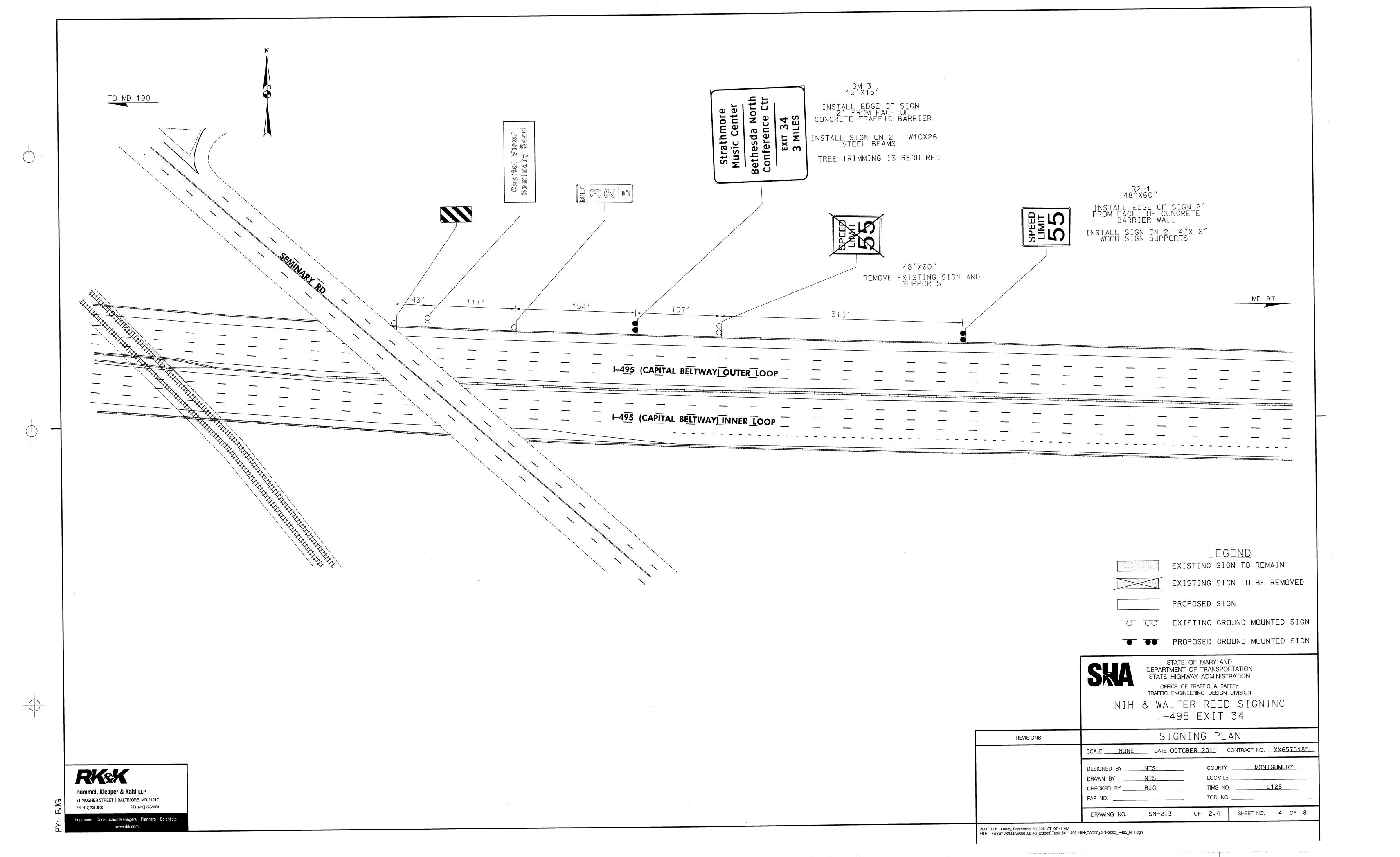
81 MOSHER STREET | BALTIMORE, MD 21217
PH: (410) 728-2900 FAX: (410) 728-3160

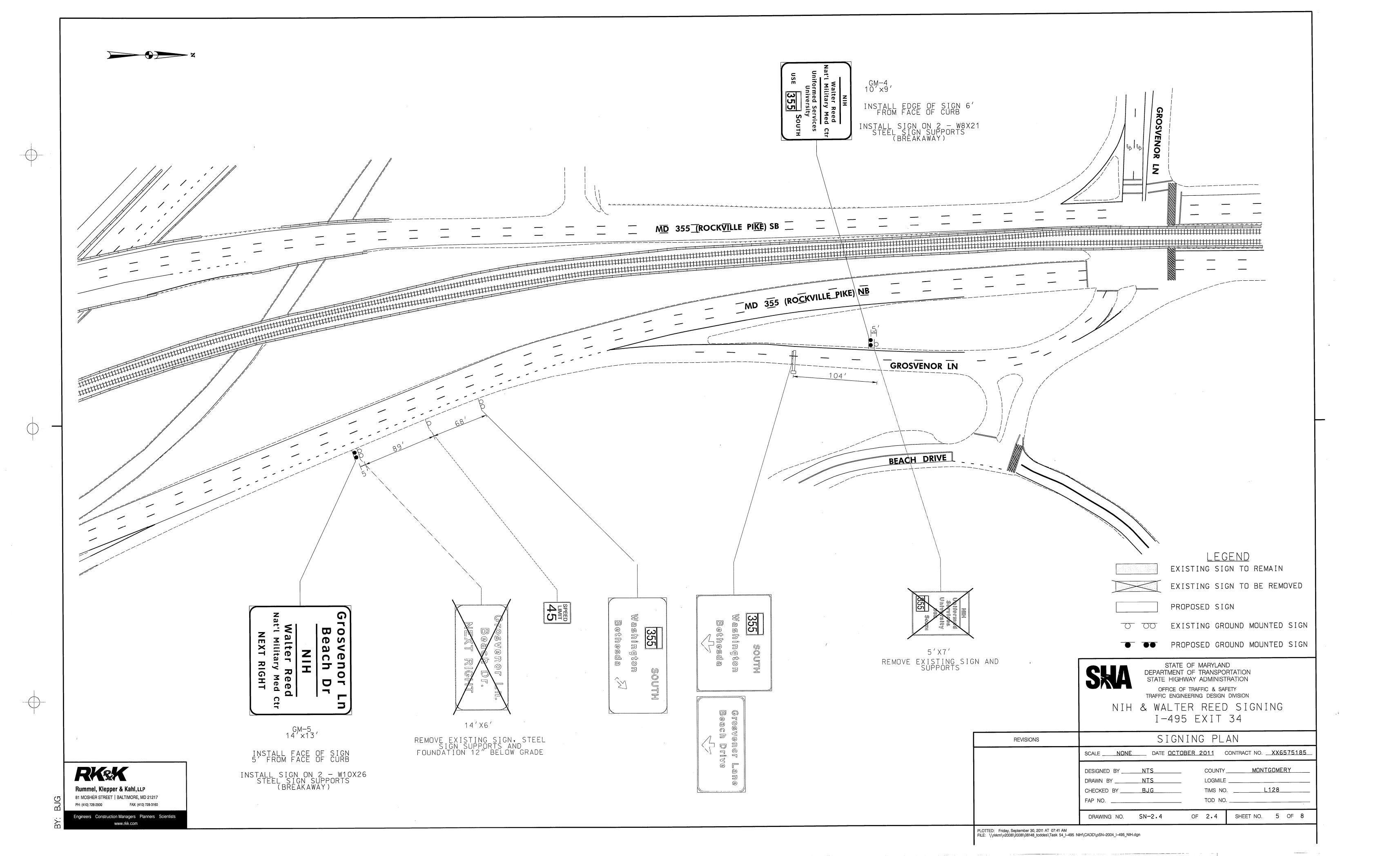
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N _O	·	>			SIZE		С	OLOF	₹	BOR	DER			
PANEL	SHEET NO.	QUANTITY	LEGEND	AREA (S.F.)	WIDTH	HEIGHT	LEGEND	BORDER	BCKGRND	WIDTH	RADIUS	ARROW	SHIELD	REMARKS
GM-1	SN-2.1	1	NIH Walter Reed Nat'l Military Med Ctr EXIT 34 BORDER 17.8" 145.1" 17.1" FONT: (1) ClearviewHwy-4-W (2) ClearviewHwy-5-W (3) ClearviewHwy-2-W	150	15′	10′	W	W	G	2"	12"			EXTRUDED ALUMINUM
GM−2	SN-2.2	1	Rockville Pike NIH Walter Reed Nat'l Military Med Ctr EXIT 34 BORDER 16.2" FONT: (1) ClearviewHwy-4-W (2) ClearviewHwy-5-W (3) ClearviewHwy-2-W	180	15′	12′	W	W	G	2"	12"	_	_	EXTRUDED ALUMINUM
GM-3	SN-2.3	1	Strathmore Music Center Bethesda North Conference Ctr EXIT 34 3 MILES BORDER R=12" TH=2" FONT: (1) ClearviewHwy-4-W (2) ClearviewHwy-3-W	225	15′	15′	W	W	G	2 "	12″			EXTRUDED ALUMINUM

COLORS: B=BLACK, BLU=BLUE, BRO=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW, R=RED, FYG=FLUORESCENT YELLOW/GREEN, FY=FLUORESCENT YELLOW

SHA

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

8 WALTED DEED CIO

NIH & WALTER REED SIGNING I-495 EXIT 34

REVISIONS	SIGN	DETAILS	AND [DIMENSI	ONS	
	SCALE NONE	DATE <u>OCTOBE</u>	R 2011	CONTRACT NO	XX6575185	
	DESIGNED BY		COUNTY	MONTO	GOMERY	
	DRAWN BY	NTS	LOGMILE	=		
	CHECKED BY	BJG	TIMS NO	D. <u>L 1</u>	128	
	FAP NO.		TOD NO)		
	DRAWING NO.	SN-3.1	OF 3.2	SHEET NO.	6 OF 8	
PLOTTED: Friday, September 30, 2011 AT 07:41 AM FILE: \rkkm\v2008\2008\08148_tcddes\Task 54_I-495 NIH\CADD\pSN-3001_I-495_NIH.dgn						

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BORDER COLOR SIZE PANEL DESIGNATION BORDER LEGEND RADIUS ARROW WIDTH HEIGHT REMARKS LEGEND 10'-0" **Walter Reed** Nat'l Military Med Ctr 85.8″ Uniformed Services M1-5(1) 30"X24" University EXTRUDED ALUMINUM 12" SN-2.4GM-4South 16.2" 110.6" FONT: BORDER (1) ClearviewHwy-5-W R = 12''(2) ClearviewHwy-4-W TH=2" 14'-0" Grosvenor Ln Beach Dr NIH EXTRUDED ALUMINUM 2" | 12" WG 182 Walter Reed 10.7"(1) SN-2.4GM-5Nat'l Military Med Ctr 13.6" **NEXT RIGHT** 10"(2) 13.6" FONT: BORDER (1) ClearviewHwy-5-W R = 12''(2) ClearviewHwy-4-W TH=2''

COLORS: B=BLACK, BLU=BLUE, BRO=BROWN, G=GREEN, W=WHITE/SILVER, Y=YELLOW, R=RED, FYG=FLUORESCENT YELLOW/GREEN, FY=FLUORESCENT YELLOW

SHA

DRAWING NO.

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

NIH & WALTER REED SIGNING I-495 EXIT 34

OF 3.2 SHEET NO. 7 OF 8

SIGN DETAILS AND DIMENSIONS

SCALE NONE DATE OCTOBER 2011 CONTRACT NO. XX6575185

DESIGNED BY NTS COUNTY MONTGOMERY

DRAWN BY NTS LOGMILE

CHECKED BY BJG TIMS NO. L128

FAP NO. TOD NO.

SN-3.2

PLOTTED: Friday, September 30, 2011 AT 07:41 AM FILE: \\rkkm\v2008\2008\08148_tcddes\Task 54_I-495 NIH\CADD\pSN-3002_I-495_NIH.dgn

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GUIDE SIGN STEEL SUPPORT CHART

SIGN NO.	SIGN SIZE (WXH)	SHEET NO.	POST SIZE	*BW OR NBW	SUPPORT L - I	SUPPORT L - 2	SUPPORT L - 3	LA ⁻ CLE <i>A</i> OFFSET	TERAL RANCE OBJECT **	SUPPORT SPACING FROM LEFT EDGE OF SIGN
GM-1	15′X10′	SN-2.1	W8X21	BW	17.5	17.5		6'	ES	3'-9'-3'
GM-3	15′X15′	SN-2.3	W10X26	NBW	20	20		2′	FOCTB	3'-9'-3'
GM-4	10'X9'	SN-2.4	W8X21	ВW	18.5	17.5		6′	FOC	14"-92"-14"
GM-5	14′X13′	SN-2.4	W10X26	ВW	21.5	23.5		5′	FOC	2.5′-9′-2.5′
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		···								
								774		
-										
					ak 15/1/	= BREAKAW	AY NDW -	NON-BREAKAV		

I. THE CONTRACTOR SHALL VERIFY THE FINAL FOUNDATION TYPE TO BE USED SO THAT THE FOUNDATION DOES NOT EXCEED A 4" PROJECTION ABOVE THE GROUND. 2. ALL NON-BREAKAWAY FOUNDATIONS SHALL BE TYPE A

STEEL BREAKAWAY SUPPORT FOUNDATION SELECTION MATRIX

POST	FOUNDATION			ROAI	DWAY C	UT / F	TLL SLC	PE				
SIZE	DIAMETER	<u></u> ≥2:I	3:1	4:1	5 : l	6:1	7:1	8:1	9:1	10:1	12:1	<u>≤</u> 13:1
W6×9	30"	*	С	С	С	С	В	В	В	Α	A	Α
W6x12 or TS 5"X5"X1/4"	30"	*	С	С	С	С	В	В	В	Α	Α	Α
W6x15 or TS 6"X6"X ¹ / ₄ "	30"	*	С	С	С	С	В	В	В	Α	Α	Α
W8×18	30"	*	С	С	С	С	В	В	В	Α	Α	Α
W8x21 or TS 7"X7"X1/4"	30"	*	С	С	С	С	В	В	В	Α	A	Α
WI0x22 or TS 8"X8"X5%"	36"	*	*	С	С	С	С	В	В	В	Α	Α
WI0×26	36"	*	*	С	С	С	С	В	В	В	Α	А
W12×26	36"	*	*	С	С	С	С	В	В	В	Α	Α
W14×30	36"	*	*	С	С	С	С	В	В	В	Α	А
W16×31	36"	*	*	С	С	C	С	В	В	В	Α	А
W18×35 or W18×40	36"	*	*	С	С	С	С	В	В	В	Α	А
W21×44	42"	*	*	С	С,	С	С	С	В	В	В	А

* IF A FOUNDATION EXCEEDS THE 4" AASHTO CRITERIA, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR APPROPRIATE GUIDANCE.

SEE MARYLAND STANDARD DRAWINGS FOR FOUNDATION DETAILS:

TYPE A = STANDARD MD 801.04 TYPE B = STANDARD MD 801.04-01 TYPE C = STANDARD MD 801.04-02

GUIDE SIGN WOOD SUPPORT CHART

SIGN NO.	SIGN SIZE (WXH)	SHEET NO.	POST SIZE	*BW OR	SUPPORT L - I	SUPPORT L - 2	SUPPORT L - 3	LAT CLEA	ERAL RANCE	SUPPORT SPACING FROM LEFT EDGE OF SIGN
	(WAII)	NO.	31ZL	NBW	L - 1	L Z	LJ	OFFSET	OBJECT **	LEFT EDGE OF SIGN
										
				<u>.</u>						
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		·								
									<u> </u>	
							····			
	<u> </u>									
							1			
				 						
		· -								
					* BW = 1	BREAKAWAY	NBW = NO	N-BREAKAWAY		

NOTES: 1. SEE MARYLAND STANDARDS 812.01, 812.04, AND 813.02 FOR WARNING AND REGULATORY SIGN INSTALLATION.

STEEL POST BREAKAWAY

SYSTEM SELECTION CHART

Al6

ASSOCIATED POST SIZE

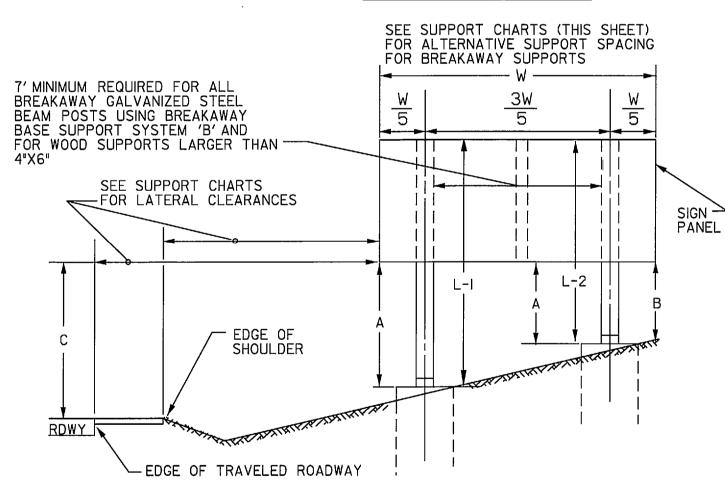
W6X9

W6X12, W6X16, W8X18, W8X21

8"X8" SQUARE AND ALL I-BEAMS LARGER THAN W8X2I

2. LI AND L2 POST LENGTHS DO NOT INCLUDE EMBEDDMENT LENGTHS. CONTRACTOR SHALL INCLUDE 5' EMBEDDMENT FOR ALL 4"X4" & 4"X6" SUPPORTS.

CONTRACTOR SHALL INCLUDE 6' EMBEDDMENT FOR ALL 6"X6" & 6"X8" SUPPORTS. SIGN CLEARANCE



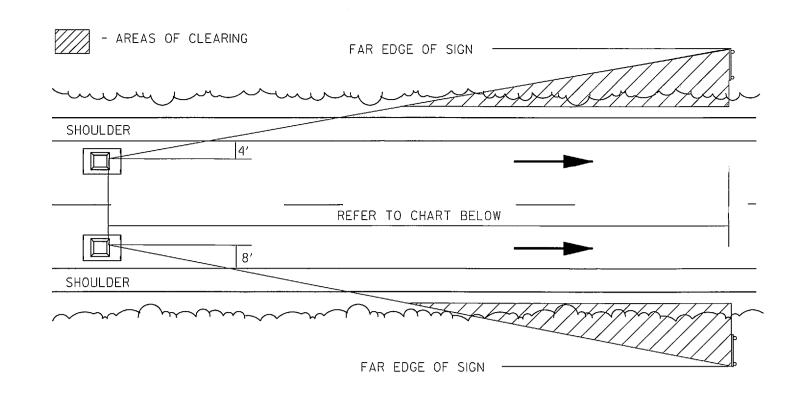
VERTICAL CLEARANCE OF SIGNS

- A. 7'6" MINIMUM FOR BREAKAWAY SUPPORTS OR 5'-6" FOR NON-BREAKAWAY SUPPORTS.
- B. 2.0' MINIMUM C. 7'6" MINIMUM & PREFERABLE. THIS DIMENSION IS TO BE INCREASED ONLY WHEN REQUIRED TO MEET A = 7'-6" FOR BREAKAWAY OR A (MIN.) = 5'-6" FOR NON-BREAKAWAY AND B (MIN) 2'-0"
- ALL DIMENSIONS ARE TO BOTTOM OF SIGN
- *TOTAL WEIGHT BELOW THE HINGES SHOULD BE LESS THAN 600 POUNDS

LATERAL CLEARANCE

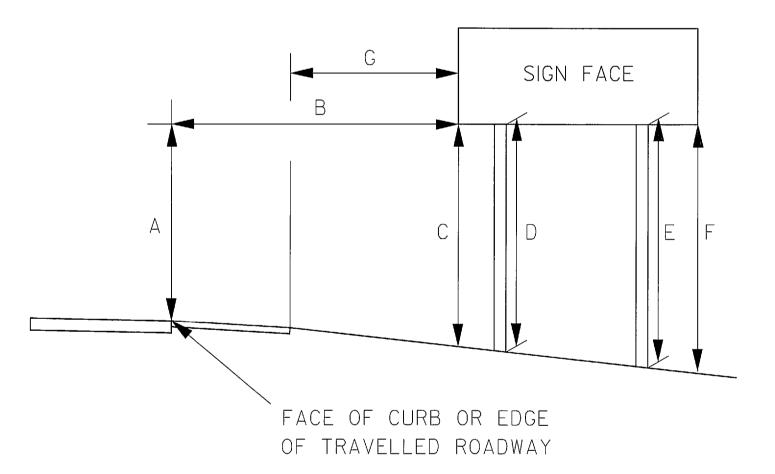
- SEE SUPPORT CHARTS
- **OBJECT CODES
- FOW = FACE OF W-BEAM TRAFFIC BARRIER FOCTB = FACE OF CONCRETE TRAFFIC BARRIER
- FOC = FACE OF CURB
- ES = EDGE OF SHOULDER
- ETR = EDGE OF TRAVELED ROADWAY
- CM = CENTERED IN MEDIAN CG = CENTERED IN GORE (6' MINIMUM FROM EDGE OF PAVEMENT)

FOLIAGE CLEARING FOR SIGN INSTALLATIONS



Acceptable Viewing Distance for Sign	
Copy Size	<u>Distance</u>
20" u.c.	1000 ft
16" u.c.	800 ft
13.3 u.c.	675 ft
10.67 u.c	550 ft

SIGN STAKEOUT DIMENSIONS



NOTE: SEE SECTION 802 IN THE CONTRACT DOCUMENTS FOR SIGN STAKEOUT LOCATIONS.



STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

NIH & WALTER REED SIGNING I-495 EXIT 34

REVISIONS	G	UIDE SI	GN SUPI	PORTS	
	SCALE <u>NONE</u>	DATE <u>OCT</u>	OBER 2011 (CONTRACT NO. XX6575185	<u>5</u>
	DESIGNED BY			MONTGOMERY	_
	DRAWN BY CHECKED BY			L128	_
	FAP NO.		TOD NO.		_
	DRAWING NO.	SN-4.1	OF 4.1	SHEET NO. 8 OF 8	

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